AN EVALUATION OF THE EFFECTS OF A PERFORMANCE PAY PLAN ON PRODUCTIVITY OF EMPLOYEES IN A PROFESSIONAL SERVICES FIRM

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This study examined the effects of a productivity-indexed pay for performance plan in a professional services firm. The new plan was implemented after productivity decreased under an existing plan. Performance of staff and senior level accountants was analyzed across three departments under a three-year baseline and a two-year intervention period. Several measures of productivity indicated that the intervention was effective in improving production, especially for employees with full annual workloads. Percentage of salaries earned in incentives was comparable for both the baseline and intervention periods. Possible explanations for trends in the data, weaknesses in the plan, and implications for future research are also discussed.

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INTRODUCTION

Human performance is a critical factor within organizations due to the fact that competitive business standards rely on efficient, effective individual workers (Gilbert, 1978). Organizations have demanded overall improvements in performance due to increasing global competitiveness especially in the last few decades (Blinder, 1990). Organizational performance will improve once individuals improve their own performance, which over time will have an effect on the organization's profitability (McAdams, 1996). The ability to improve performance and maintain such improvements over time may well determine an organization's success or failure (Smoot & Duncan, 1997).

Daniels (1989) has described practices that improve and sustain human performance as "performance management." This systematic approach relies heavily on performance measurement and managing performance contingencies as means to maximize performance. Performance management principles suggest that in order to determine if a given management procedure is effective, it is important to specify both the behaviors and results to be affected. Developing a way to measure these behaviors and results must be determined to identify the methods for changing current performance.

Finally, once these intervention methods are implemented, the results must be evaluated to assess the effects of these efforts (Daniels, 1989).

As cited by McAdams (1996), a study of 437 companies reported on their use of performance management, which compared their financial performance to that of companies that did not use performance management. In most cases, "companies with performance management programs have higher profits, better cash flow, stronger stock market performance, and a greater stock value than companies without performance management" (pp. 72-73). Additionally, companies practicing performance management techniques found that productivity was also greater.

Improving productivity in the work place has been a major focus for American businesses and has led companies increasingly to incentive compensation systems (Lawler, 1990). Productivity alone, however, is only one reason that organizations implement these compensation plans. Various incentive plans yield different results and organizations adopt them for different reasons (Bucklin & Dickinson, 2001). An organization's survival depends on whether individual contingencies support behavior that will ultimately lead to the achievement of the organizational objectives. Incentive compensation systems can be good examples of practices that align individual and organizational success in that employees can be paid for production of goods and services that eventually lead to increased profits (Redmon & Wilk, 1991). Unfortunately, some companies that turn to such incentive compensation systems do not align individual performances with the organization's goals and end up paying employees based on what they should do rather than what they actually do.

Peach and Wren (1992) point out that the use of incentive compensation plans to improve employee performance dates back to our earliest records of history. During much of that time, however, using incentives was not based upon objective measures. During and after the industrial revolution, there was an increasing demand for efficiency and improved human performance by U.S. factories. These demands, combined with a more economic rationale, led to more measurable, sophisticated incentive systems. Organizational behavior theory combined with the development of motivation theory has provided a further rationale for financial incentives. Incentive systems have continued to capture the interest of many organizations as a way to increase productivity by both workers and managers and this interest has led to the implementation of such systems (Peach & Wren, 1992).

Interest in different pay systems has waxed and waned throughout history with no apparent relationship with the empirical efficacy of such systems (Dickinson & Gillette, 1993). Determining both the success and prevalence of certain types of incentive systems (e.g., profit sharing) are difficult to assess due to the fact that much of the evidence results from employer surveys and case studies (Sundby, Dickinson, & Michael, 1996). Although there has been data to support the effectiveness of alternative pay systems (Blinder, 1990; Bucklin & Dickinson, 2001; Lawler, 1990), much of this renewed interest can be linked to the economic realities of today's market (Dickinson & Gillette, 1993).

For example, businesses today are downsizing, streamlining, and improving productivity in an effort to compete with other companies (Honeywell-Johnson &

Dickinson, 1999). This was documented in a study by the Hay Group in which 91% of the 500 medium and large American companies they surveyed reported they had drastically changed their organizational culture (Honeywell-Johnson & Dickinson, 1999). Additionally, 73% recognized the need to realign their pay systems to reflect those changes, and 54% were already in the process of doing so (Flannery, Hofrichter, & Platten, 1996). As these companies began turning away from more traditional pay systems, the adoption of pay for performance plans has become more prevalent.

"In many cases, this new approach to pay is an incentive-based pay system in which all or part of an employee's pay is contingent upon his or her productivity or some economic measure of organizational success" (Sundby et al., 1996, p. 46). Although pay for performance plans differ in certain aspects, they all share one common variable in that employees are given bonuses, incentives, or wages based on their performance. Pay for performance plans can also reward the performance of a particular group, department, or organization. "Moreover, they are designed to treat compensation as a variable production cost, making the relationship between wages and profitability viable to organizational officials. Thus, officials can control and monitor the cost as they do other economic indices, which helps them improve the organization" (Honeywell-Johnson & Dickinson, 1999, p. 91).

Pay for performance plans have increased productivity in comparison to hourly pay in both applied and laboratory settings (see Bucklin & Dickinson, 2001 for a thorough review). A recent meta-analysis of 45 published studies examining incentive pay also concluded that there is strong evidence that work performance is significantly

improved (an average of 22% gain) when employees are paid for exceeding objective goals (Stolovitch, Clark, & Condly, 2002). Due to the success of these plans, many companies have started replacing or supplementing their current, traditional hourly wage systems with various pay for performance plans. As cited in Frisch and Dickinson (1990), the American Productivity Center concluded that 75% of the 1600 organizations they surveyed currently had some type of pay for performance plan and, of those plans, 80% had been implemented within the previous five years.

Although pay for performance plans have proven to improve performance and increase productivity, there are several factors that should be considered regarding their design and implementation. For example, Oah and Dickinson (1992) noted that researchers have raised questions regarding (1) how the incentives should be related to performance, (2) how the performance standards should be developed, (3) what the appropriate proportion of incentives to base pay is, (4) whether incentives are appropriate, and (5) how frequently incentives should be provided. Oah and Dickinson (1992) examined how incentives are related to performance (the performance pay function) to address one of these design issues. They concluded that productivity was comparable for subjects exposed to either a linear or exponential performance pay function, even though the exponential pay function group earned more money than the linear pay function group. These results suggest that differences in the way that monetary incentives are related to performance may not differentially affect performance. Such a conclusion must be tentative because the results are from only one study and that study involved a laboratory-based work simulation rather than an actual work setting.

Additional research is needed to address this issue, as well as the above-mentioned questions regarding design and implementation.

Lawler (2000) pointed out that pay for performance plans are difficult to study as well as to implement because they are not one-size-fits-all silver bullets. "No single plan fits all organizations nor is pay for performance an accomplishable objective in all organizations" (p. 9). Pay for performance should be an important component of an organization's reward plan and should also reflect the strategy, structure, and management style. More specifically, pay for performance plans need to effectively translate the organization's business strategy into measurable outcomes that align with the reward system. Since it is not likely that any one particular plan will achieve all the objectives in the reward system, an effective pay for performance system within an organization is likely to have several different pay plans; for example, across departments, level of training, etc. (Lawler, 2000).

While there are several variations of alternative pay for performance plans, there are four basic plans that link compensation to objective financial or operational measures. These plans include: individual incentives, group incentives, gainsharing, and profit sharing (Abernathy, 2000: McAdams & Hawk, 1992). Analyses of the defining features of each plan, along with the way in which these plans are linked to employee performance are described below. Much of the information below is based on a review of incentive systems by Bucklin and Dickinson (2001).

Unlike traditional hourly or salary wage systems where employees are paid a fixed dollar amount for working x number of hours (e.g., base rate/salary), with

individual incentive systems, the amount an employee can earn in incentives is contingent upon the number of units of work they produce. Examples of these programs can be incentives either based entirely on the number of units produced (piece rate pay), or a base salary with the opportunity to earn additional incentives based on some objective organizational measure(s). For example, with piece rate pay, one must first determine the value of the job at standard output (Grant, 1999). A base rate is then determined for an output level that is attainable by a "normal" employee working under normal working conditions (i.e., standard output). According to Grant (1999), if the base pay for a given job is $10 per hour, this is divided by the standard output, for example 20 units per hour to get a piece rate; an incentive pay per unit of product or service produced. In this example, the piece rate is $10 per hour divided by 20 units per hour or $0.50 per piece. Other piece rate pay systems, however, provide the employee a guaranteed base pay with the opportunity to earn piece rate pay at volumes that exceed some predetermined standard output level (Grant, 1999). This allows employees to earn a dollar amount per hour plus additional pay once the goal is exceeded. To read about an excellent example of a modern organization utilizing piece rate pay (the Lincoln Electric Company), see Handlin (1992).

Bucklin and Dickinson (2001) discussed the similarity between incentive pay systems, on which there has been surprisingly little research, and basic schedules of reinforcement, on which there is a large body of basic laboratory research. "In their simplest form, most incentive pay systems represent ratio schedules of reinforcement where consequences are contingent upon the number of behaviors that are emitted" (p.

55). This parallel between laboratory schedule preparations and incentive pay systems deployed in complex corporate environments has been observed by many behavior analysts, but it has also generated much critical commentary in the last decade. Dickinson and Poling (1996) for example, noted that incentive pay plans include many elements not typically present in laboratory reinforcement schedules (e.g., elaborate instructions, complex response sequences, conditioned reinforcers, huge delays to the scheduled consequence). Even Bucklin and Dickinson's statement quoted above is problematic. Incentive pay systems rarely, if ever, pay money contingent on the number of behaviors; they pay contingent on the quantity of results, the outcome of many behaviors.

Despite the qualification that it is an oversimplification to identify incentive pay systems simply as ratio schedules of reinforcement, it is true that most incentive pay contingencies share a basic property with ratio schedules: how much you receive is a function of how much you produce. This feature differentiates ratio schedules from time-based schedules in the laboratory, and it has been repeatedly shown that ratio schedules generate high levels of responding in the laboratory (Ferster & Skinner, 1957, Morse, 1966). That relationship between performance and outcome is also typical of many incentive pay plans, but not of hourly pay or salary systems. One may cautiously extrapolate from basic research, then, that the performance-outcome relation in incentive pay plans may be a critical element expected to motivate behavior that yields productive results. As Bucklin and Dickinson (2001) concluded, it is likely that very feature of incentive pay systems that is responsible for the increased performance observed under incentive pay compared to hourly pay systems.

Individual incentives are based solely on the performance of individual employees. As a result, individual incentive plans provide the tightest link between performance and pay. This can be attributed to the fact that (1) incentives are based on the employee's own individual performance, (2) incentives are based on behaviors or results that have been clearly specified, (3) if the goals are met, the employee is certain to receive the incentive, and (4) incentives are usually paid as soon after the performance as possible, for example, as part of his/her paycheck (Bucklin & Dickinson, 2001).

Like individual incentives, group incentives are also based on clearly specified goals, are certain, and distributed frequently. Group incentives, however, rely not only on the individual's performance, but also depend upon the performance of others in a specified group, team, or department. Group incentives typically reward all eligible members of a group for their improved performance. When members of a group are given incentives, the incentives are either distributed evenly across group members or awarded differentially according to individual contribution. The extent to which the incentives are tied to individual performance depends on the size of the group and by the rules governing how money is to be distributed. Although group incentive programs are not widely used, they have been implemented in some manufacturing industries where group effort is required (Honeywell-Johnson & Johnson, 1999), and often in team-based organizations (Yeatts & Hyten, 1998).

Research on both individual and group incentives has begun to accumulate over the past several years (Govern & Jennings, 1991; Honeywell-Johnson & Dickinson, 1999; Jessup & Stahelski, 1999; Oah & Dickinson, 1992; Smoot & Duncan, 1997;

Sundby, Dickinson, & Michael, 1996). In both laboratory and applied studies, individuals have consistently performed better when given individual incentives as compared to hourly wages (Allison, Silverstein, & Galante, 1992; Frisch & Dickinson, 1990; George & Hopkins, 1988). Smoot and Duncan (1997) point out "a general finding among these studies is that workers tend to perform at higher levels when they are paid for what they produce as opposed to being paid for merely showing up for work" (p. 8). As cited by Bucklin and Dickinson (2001), a statistical meta-analysis published by Jenkins, Gupta, Mitra and Shaw (1998) found that of the 39 experimental studies conducted between 1960 and 1996, individual incentives were statistically correlated with improved performance quantity in laboratory experiments, laboratory simulations, and field experiments. In applied settings, financial gains have increased as much as 15% to 30% while net profits have totaled $56,000 to $400,000 per year (Dickinson & Gillette, 1993).

While several researchers have found group incentives to be as effective as individual incentives (e.g., Honeywell-Johnson & Dickinson, 1999), there are data to support the contrary (Bucklin & Dickinson, 2001). A study by Thurkow, Bailey, and Stamper (2000) found that individual incentives were more effective than group incentives in a telephone research company. Additionally, two other studies (Dickinson & Honeywell-Johnson, 1999; London & Oldham, 1977) found that top performers may decrease their performance once they are switched from individual to group incentives.

Gainsharing plans are another common type of incentive pay system. According to Bullock and Lawler (1984), gainsharing is defined as, "an organizational system of

employee involvement with a financial formula for distributing organization-wide gains" (pp. 23-24). From 1950 to 1970, gainsharing programs expanded in scope and application by larger corporations (Govern, 1991). This increase in growth is demonstrated by the fact that American corporations implemented nearly 600 gainsharing plans by 1968 (Fein, 1976). Unlike individual incentive programs, individuals participating in gainsharing plans generally have less influence over the rewards they may earn; gainsharing rewards individuals based on departmental, divisional, or organizational financial goals and are distributed monthly, quarterly or semiannually, or may be deposited into employee retirement accounts (Abernathy, 1989; Govern, 1991; Honeywell-Johnson & Dickinson, 1999). Because gainsharing bonuses are based on the aggregate performance of a large number of individuals, they are only indirectly linked to desired performances (Bucklin & Dickinson, 2001).

The most prevalent traditional type of gainsharing program is the Scanlon Plan. This consists of a participation system that requires workers and managers to develop and evaluate ideas to improve efficiency and lower costs. This plan also includes an equity system which distributes monthly bonuses to employees based on the extent to which efficiency is attained in relation to the company's predetermined standard (Govern, 1991). Improshare, another gainsharing program, excludes a formal system for employee participation. According to its originator, Improshare "is a work measurement based plan which permits close productivity measurement in terms of output units, not monetary values of cost savings, to avoid the influence of monetary factors under changing environmental conditions" (Govern, 1991, p. 78). Although several gainsharing

definitions indicate that there is always a financial bonus system to reinforce organizational performance, all programs do not include a system of employee participation to generate and evaluate cost-saving ideas (Govern, 1991).

Like gainsharing programs, profit-sharing plans are based on the success of the entire organization so there is little relation between the employee's performance and the amount of the bonus (Honeywell-Johnson & Johnson, 1999). "In profit sharing, increased worker efforts in one department could be offset by a lack of diligence in others" (Peach & Wren, 1992, p. 13). According to Lawler (1990) profit sharing plans are not likely to influence individual performance due to the fact that employees have little influence over the organization's profitability. Dickinson and Gillette (1993) point out that as the group size increases, the performance of a single individual contributes less and less to the overall productivity of the group. This often results in employees believing that their rewards will not be significantly decreased by their own decreased performance. Because all employees share in profits regardless of their contributions, a share of profits at the end of the year gives no incentive for maximum daily performance (Peach & Wren, 1992). Additionally, even if employees work hard, there is the possibility that, despite their efforts, the organization will not do well and no bonus will be given. Even if employees assume that hard work guarantees a bonus, it is a slow and cumulative progression toward that bonus (Redmon & Wilk, 1991).

The advantages of profit sharing do not appear to be related to productivity increases, but rather associated with: (1) making organizational costs variable, allowing them to fluctuate according to company profits, resulting in market share gains and

greater job security, (2) tying wage increases to internal measures of success rather than external variables, (3) educating employees on the financial condition of the company, and (4) advocating that cooperative effort is required for organizational success (Dickinson & Gillette, 1993). Blinder (1990) also questioned whether profit sharing plans actually pay for themselves considering the small increases in productivity associated with profit sharing, and that individuals under profit sharing plans receive higher wages than employees who receive hourly wages.

After reviewing profit sharing, employee stock options, and gainsharing, Blinder (1990) stated that although gainsharing programs may be the best, there was not enough evidence to support this. There are numerous reports of successes with gainsharing programs as well as profit-sharing programs, but many of these reports are uncontrolled case studies (some reported in business magazines and trade publications) rather than rigorous research articles. In fact, many reports of successes are based solely on surveys of corporate users rather than on objective measures of productivity. These methodological problems make it difficult to draw firm conclusions regarding effectiveness of these programs.

Considering the incentive systems that have been discussed thus far, it is apparent that individual incentive systems provide the tightest link between individual performance and pay. Because of the various problems mentioned in traditional pay systems, Abernathy (2000) has developed an innovative pay for performance plan, the Total Performance System (TPS), which provides employees specific goals, with monthly performance reporting, and incentive payouts. The TPS gives employees the

opportunity to earn incentives, in addition to their base salaries, once they have met and/or exceeded specified performance standards.

The first step in developing a TPS is to develop a performance scorecard. This is a format for converting multiple performance measures to a common objective rating scale, and then assigning weights to indicate the relative importance of the various measures in the scorecard. The weights of these measures are then summed to compute a single performance index. A strategic scorecard for the entire organization is then developed to balance short-term profitability and long-term growth. Once designed, this scorecard guides the development of all the other scorecards from the top down. Abernathy refers to this as "cascading objectives." Advanced database techniques allow for management of performance measures for multiple employees at multiple locations.

The amount an employee can earn in incentives under this system varies according to the individual organizational design of the program. These factors include the level of their performance, the weight of each performance measure, and the predetermined percentages of the firm's profit the organization has agreed to share with employees. In Abernathy's model, the funding for the incentive pay pool is directly linked to the firm's controllable profit measures to insure that the amount of incentive pay available fluctuates with the firm's financial success.

Abernathy (2001) reviewed data from twelve companies that implemented this system where employees received a base salary with the opportunity to earn additional money in incentive pay once they met and/or exceeded their performance goals. First, he examined whether the percentage of "incentive opportunity" (the maximum pay that

could be earned under the system) available affected performance and found no relationship between performance and the percentage of incentive opportunity to base pay for percentages that ranged from 1% to 22%. Next, he examined the percentage of the actual incentive payout to base pay ranging from 1% to 33% and found that incentive pay affected performance trends only when incentive pay was above 20% or higher of base pay. This suggests that, according to this applied data, employees must receive a minimum of 20% of their base pay in incentive pay in order to affect performance (Bucklin & Dickinson, 2001). Although the extent to which performance was affected was not mentioned, the results from these analyses can help guide organizations when designing monetary incentive systems.

This thesis describes a case study at a Certified Public Accounting firm in which a performance pay plan similar to Abernathy's Total Performance System was implemented. The plan included a scorecard measurement system for individuals that could yield varying payouts twice a year. This pay for performance plan was designed by the company's Chief Financial Officer (CFO) after a declining trend in productivity was observed under an existing incentive system. Although several versions of the plan were designed specifically for different levels of employees, this study will focus on the performance of the two most junior employee levels: staff and senior accountants. These levels were targeted for examination because they are the "line workers" of this professional service firm; they do most of the production work with few management responsibilities. In addition, their pay for performance plans emphasize individual productivity to a larger extent than the plans for higher-level employees, so they can yield

data focusing on the relation between pay and individual productivity. The previous and new incentive plans will be described in detail, and the results will discuss what impact the new incentive system had on employee performance.

CHAPTER 2

METHOD

Participants and Organizational Setting

The study took place in a Certified Public Accounting (C.P.A.) firm in Dallas, Texas. The firm employed approximately 50 - 85 employees (depending on the year) across 6 departments. These departments included Tax, Audit, Accounting Services, Compensation & Benefits, Consulting, and Resources & Operations Management. This thesis focuses on the three largest departments: Tax, Audit, and Accounting Services. The firm operates on a time and billing system that involves not only producing a final product (e.g., a tax return or financial statement), but also tracks how much billable time is produced compared to how much of that time is actually billed to the client. For example, an employee who spends time on a given project accumulates charge hours according to his/her billing rate. All full-time employees were salaried and part-time employees were paid an hourly wage.

Tax services include preparation of income and all other types of tax returns and tax planning. Auditing provides services to clients who maintain their own accounting records and request the firm to prepare financial statements. Auditing also conducts independent audits of financial statements to permit an expression of an opinion on their fairness and conformity with generally accepted accounting principles. Accounting

Services provides technical services for clients such as maintaining accounting records, accounts receivable or payroll processing, etc.

Each department consists of five employee levels corresponding to the following job titles: staff, seniors, managers, senior managers, and partners. Staff accountants are the least experienced of the five levels and also have the lowest billing rates (i.e., they charge clients a lower dollar amount per hour than other levels). Level of experience and billing rates increase as one moves from staff to senior accountant, senior to manager, etc. For example, staff accountants are given a wide variety of diversified assignments under the supervision of different professionals. Seniors, however, engage in work tasks with minimal assistance. They often lead one or more staff members, instruct them in work to be completed, review their finished products, and direct necessary revisions. Managers are responsible for the efficient, accurate, complete, and timely preparation of their own client projects as well as overseeing work done by more junior accountants. Advanced technical skills in a variety of tax and accounting areas, in addition to applied management/supervisory skills are also required. The partner group brings in new business, bills clients, and comprises the top management and owners of the firm (it is a Limited Liability Partnership type of firm).

Procedure

This study was conducted to evaluate how employee performance was affected after a revised performance-based pay system was implemented. The CFO designed this system in May 1999 after many employees were unable to meet the established

performance goals of their existing system and a declining productivity trend had been noticed.

Previous incentive compensation system. The previous incentive system was in place from January 1996 through April 1999. This incentive system paid out once a year and was designed to pay employees, in addition to their salaries, a percentage of their hourly rate once they had exceeded 1800 charge hours for the year. A charge hour included any time spent (down to quarter-hour increments) on a project that would benefit the client. Additionally, writing an article, helping with recruiting fairs, working a trade show, etc. were also treated as a chargeable hour in calculating pay. The hourly rate percentage increased as the number of charge hours increased. Table 1 contains the charge hours and percentages from the old incentive system.

According to this system, an employee with an annual salary of $50,000 who produced 1950 charge hours would have an hourly rate of $24.04 ($50,000/2080 working hours in a year). Thus, $24.04 x 1.35 (the corresponding percentage from Table 1) = $32.45 for each charge hour above the 1800 hour goal. In this example, the employee would receive $4,867.50 ($32.45 x 150) in bonus pay.

New incentive compensation system. The independent variable in this study was the new incentive compensation system. This performance-based incentive system was implemented in May 1999. The new plan consisted of three components: Base Pay, Objective Pay, and Subjective Pay. The Base Pay was the individual's salary; Objective Pay was payment based upon an individual meeting specified productivity goals.

Subjective Pay was bonus pay based on manager ratings of several dimensions of employee performance funded by group performance.

The Objective Pay component for staff and senior accountants was based solely on the amount of each employee's charge hours relative to the charge hour goal established by the firm. The objective pay component for other employee levels included additional elements, but they are not the focus of this study. Under the new system, charge hours were only those hours employees spent working on projects that benefited the clients. The annual goal for each employee was 1800 charge hours, and the plan compensated anyone who met and/or exceeded 91% of this goal. The 91% of goal threshold was intended to compensate individuals who were near the goal, and thus reinforce approximations to goal levels. Due to the cyclical nature of the business, the annual goal of 1800 hours was split between two target periods, rewarding employees twice a year. The first period was from January 1st through May 31st, and the second period began June 1st and continued through December 31st. Because the two time periods were not exactly the same, the plan began paying when charge hours exceeded approximately 875 target charge hours for the first period, and approximately 925 target charge hours in the second period (target charge hours varied across departments and according to the amount of work per period). Once a threshold (91% of the goal) was achieved, employees became eligible to share a portion of the productivity they generated. Productivity was defined as the number of charge hours multiplied by one's billing rate. The number of charge hours an employee accumulated determined the percentage of productivity they were eligible to earn. The pay threshold began at 91% of

goal (i.e., target charge hours), and increased in specific increments as charge hours exceeded the goal. See Table 2 for the percentages of productivity achieved compared to productivity earned.

Additionally, if an employee exceeded the charge hour goal at the end of the first target period, those charge hours became eligible for classification into a "comp bank" that the employee could draw from to take time off of work. If the target charge hour goal was exceeded, an employee was not required to select hours for the comp bank; this was an alternative incentive to the cash payout. The employee could also split the hours and receive both time off and extra pay. Thus, on June 1st, employees selected the number of eligible hours (that exceeded the goal) they chose to bank as time off. The remaining balance was paid out in cash at the qualifying percentages at the end of the year. Employees could not bank more than 80 hours and management had to approve those hours. Appendix A shows a complete example of how to calculate Objective Pay and Comp Bank Time.

Subjective Pay rewarded employees for performance not related to charge hours, yet still important to the overall success of the firm. Subjective Pay was awarded annually based on performance dimensions that were judged and rated by the managers, senior managers, and partners using a 3-point scale. These dimensions included realization, first pass accuracy and technical competencies, customer service, and going above and beyond activities. Realization referred to a financial measure calculated by dividing what was actually billed to a client by what was considered for billing. For example, if a client was billed $2500 but the actual amount of work that could have been

billed was $3000, this employee's realization for that project would be 83% (work may be written off for various reasons; e.g., repeated customer, amount the client was quoted up front for a project, etc.). First pass accuracy and technical competencies was defined as a project going through the review process without any errors on the first pass (e.g., miscalculated numbers, typos, personal information). Customer service was based on producing quality products, understanding the firm's mission and vision, and customer feedback. Going above and beyond activities included writing articles for the firm, developing materials for continuing education within the firm, and marketing.

The bonus pool for Subjective Pay was funded by a percentage of a given service area's productivity. The number of people who reached 91% or better of their charge hour goal determined the pool's percentage. That is, the more people within a department who met or exceeded the goal, the larger the percentage that would fund the pool. For example, if more than half of a department met their goal, 0.75% of the group's productivity would fund the pool; if less than half of the department met their goal, 0.50% of the group's productivity would fund the pool.

The managers, senior managers, and partners rated each employee on 10 items relating to the above performance dimensions. These ratings were then summed so that each employee had a score out of a possible 100. All of the scores from the entire department were then summed and each employee's individual score was divided by the total group score to determine his/her percentage of productivity earned. The percentage of productivity earned was then multiplied by the total dollar amount in the pool to

determine each employee's individual payout amount. See Appendix B for a complete example.

Design and Data Collection

An AB design was used to compare employee performance under the previous and new incentive systems. Company records were reviewed from January 1996 through April 1999 and served as the source for baseline data. This included three years of data that corresponded to the following dates: January through December 1996, January through December 1997, and May 1998 through April 1999. After December 1997, the calendar year changed to that of the fiscal year and thus resulted in data collection from May 1998 through April 1999. In 1996, this included 6 staff and seniors from Audit, 3 from Accounting Services, and 5 from Tax. During 1997, there were 6 from Audit (3 of whom were also there in 1996 and 3 new employees), 5 from Accounting Services (3 previously from 1996 and 2 new), and 10 from Tax (4 old and 6 new). The final year of baseline from May 1998 through April 1999 included 10 from Audit (2 also there in 1997 and 8 new), 7 from Accounting Services (1 there since 1996, 2 from 1997, and 4 new), and 14 from the Tax department (3 there since 1996, 4 from 1997, and 7 new).

The new performance pay system was implemented in May 1999, and data under the new system was tracked through December 2001. The data from May 1999 through December 1999 were not analyzed due to the fact that the new system was being introduced and explained to employees during this period. Data under the new system included two calendar years: January through December 2000 and January through December 2001. In 2000, this included 10 staff and senior accountants from Audit, 8

from Accounting Services, and 12 from Tax. During 2001, this included 20 from Audit (6 from 2000, 14 new), 6 from Accounting Services (4 old and 2 new), and 14 from Tax (7 old and 7 new.)

CHAPTER 3

RESULTS

In order to assess the effects of the new productivity-indexed pay for performance plan, percentages of charge hour goals attained, average charge hour totals, and percentages of total salaries earned in incentive pay were compared from January 1996 through April of 1999 (baseline period), with data reviewed and analyzed under the new incentive system from January 2000 through December of 2001. Due to extensive personnel changes over the course of the five-year period, it was difficult to assess individual employee performance between the baseline and intervention periods; therefore data were analyzed on a group basis by departments. Data from employees who worked in the organization during at least one full year of the baseline period and continued working there through at least one full year under the new incentive system, however, will be examined individually.

Percentage of Charge Hour Goal

During the baseline period (January through December 1996; January through December 1997; and May 1998 through April 1999), the annual charge hour goal was 1800 hours, and employees earned incentive pay once they met or exceeded 100% of this goal. The intervention period (January through December 2000 and January through December 2001) also had an annual charge hour goal of 1800 hours, however this was split between two pay periods, and employees earned incentive pay in increasing

increments once they met or exceeded 91% of this goal. In both the baseline and intervention periods, if an employee was not there during the entire year, his/her annual charge hour goal was prorated, and he/she was required to meet either ≥ 100% or ≥91% respectively, of that specified goal in order to earn incentive pay. Figure 1 shows each department's individual employee percentages for charge hour goals during the three baseline years. Each employee is represented by a number along the x-axis and can be tracked across years according to their individual employee number (assigned posthoc by me). Their percentage of charge hour goal met is displayed along the y-axis and was calculated by dividing each employee's total number of charge hours by the charge hour goal (i.e., a goal of 1800 hours unless prorated). Figure 2 displays percentages of charge hour goals met for each of the two pay periods for each department during 2000. The same data for 2001 is displayed in Figure 3. In these Figures, the percentage of charge hour goals were calculated the same as in Figure 1, however percentages are shown for each of the two pay periods and were divided by a charge hour goal of 875 and 925, respectively, unless prorated. If an employee was there only for one period, his/her percentage of charge hour goal is represented for that specific period only. Charge hour goals varied across employees and can be individually referenced according to employee numbers in Table 3.

Table 3 tracks employees across departments from 1996 through 2001. Each employee is represented by a number (as seen along the x-axes in Figures 1, 2, and 3), along with their charge hour goal for that year/period, their percentage of charge hour goal met for that period, and their percentage of salary earned in incentive pay. It is

important to note that in 2000 and 2001, percentages of salaries earned in incentive pay are only shown in the boxes during the 2nd periods for those years unless that employee was only there during one of the 1st periods. These percentages are based on total incentive pay earned for the year (i.e., objective and subjective pay), and because subjective pay was distributed only once annually, the percentages of incentive pay earned per period could not be broken down individually.

Table 4 summarizes information displayed in Figures 1, 2, and 3 by listing the total number of employees by department for 1996 through 2001, including the percentages of those employees who met or exceeded 100% of the charge hour goal for that year. Additionally, the percentages of employees who met or exceeded 91% of goal for 2000 and 2001 are also shown. In 2000 and 2001, data are shown for the years as a whole and split by pay period. It should be noted that the total number of employees during the split year periods tend to be higher when combined than the years as a whole (e.g., Audit shows 10 employees in the year 2000 as a whole, however when split by period, it shows 7 people in the 1st period and 8 in the 2nd period; when combined this equals 15 if you were to add this for a total for the year). If an employee was there at any time during 2000 or 2001, he/she was counted only once for the whole year period, however if an employee was there during the 1st and 2nd period, he/she was included in total counts for both periods.

Audit Department. Figure 1 and Table 4 show that in 1996, six employees worked in the Audit Department and 67% (4/6) achieved ≥ 100% of the charge hour goal. However, only one of those employees who achieved goal had a full 1800-hour goal; the

other three employees had goals of less than 500 charge hours (refer to Table 3) indicating they were hired late in the year. In 1997, there were also six employees, however only three of these employees were also there in 1996. In 1997, the percentage of employees meeting goal decreased from 67% to 50%. The three employees who achieved goal level performance (see Figure 1) also had extremely low charge hour goals because they were hired late in the year. When the calendar year changed to May of 1998 through April of 1999, Audit employee performance decreased to its lowest baseline percentage ever when only 40% of the ten employees achieved ≥ 100% of the charge hour goal. Of these ten employees, three were there in 1997, one in 1996, and seven were new.

Ten people worked in the Audit Department from January through December 2000, and the percentage of employees meeting goal decreased from 40% in the previous baseline year to 30% in 2000 who achieved ≥ 100% of the charge hour goal. During this intervention period, employees earned incentive pay once they met or exceeded 91% of the goal, and as seen in Table 4, these percentages are also listed in addition to those meeting or exceeding 100% of the goal. In the year 2000, 70% of the employees reached 91% or better of the charge hour goal and were awarded incentive pay. In 2001, there were twenty people working in Audit and the percentage of employees who met or exceeded 100% of goal decreased from 30% in 2000 to 20% in 2001. In 2001, only 45% of the employees reached 91% or more of the goal. It should be noted that there were 14 new hires in Audit in 2001, including 12 hired in the second half of the year. Figure 3

shows that only one of these new employees (#28) exceeded 100% of the charge hour goal.

Overall, there were 22 people working in the Audit Department over the three-year baseline period and 30 during the intervention period. These numbers include every employee there per year, that is, if an employee was there in 1996 and 1997, they were counted as two employees during that baseline period. During baseline, an average of 50% of the employees met or exceeded 100% of the charge hour goal. This was calculated by dividing the total number of employees who met or exceeded 100% of the goal by the total number of employees during baseline. During intervention, the number of employees reaching goal decreased from 50% during baseline to 23% who met or exceeded 100% of the goal; 55% met or exceeded 91% of the goal during intervention. By this measure (% of department achieving goals), the intervention appeared not to be successful in this department.

Accounting Services Department. In 1996, three employees worked in the Accounting Services Department and one of them reached ≥ 100% of the charge hour goal. This person (employee #37) had a prorated charge hour goal of only 218 hours (see Table 3). By 1997, two more employees joined the department and the percentage decreased to 20% when only one met 100% of the charge hour goal (employee #38 had a charge hour goal of only 147 hours.) During the 1998/99 year, two employees left and four new employees were added to the staff. Of these seven, the percentage continued to decrease from 20% in 1997 to 14% (one new employee; see Figure 2 and Table 3) who met or exceeded 100% of the charge hour goal.

From January through December 2000, there were eight employees in the Accounting Services Department. The percentage of employees meeting 100% of the goal increased from 14% (1/7) in the previous baseline year to 50% (4/8) in 2000, with 75% achieving ≥91% of the goal. In 2001, there were six employees in the Accounting Services Department. The percentage of employees who reached ≥100% of the goal decreased from 50% in 2000 to 33% (2/6) in 2001, while the percentage of employees achieving 91% of goal increased from 75% to 83%.

As Table 3 indicates, Employee #49 was the only employee in Accounting Services who worked in the organization during both the baseline and intervention periods. This employee was there the entire year in 1996 and continued working there through the end of 2001. The percentages of charge hour goals met decreased over the baseline years and were as follows: 99.98% in 1996, 95% in 1997, and 92% in 1998/99. During intervention, percentages increased to 93% in 2000 (i.e., 92% for the first period and 94% for the second), and continued to increase to 97% in 2001 (97% for the first period and 96% for the second).

A total of 15 employees worked in the Accounting Services Department throughout the baseline period, and an average of 20% of these employees met or exceeded 100% of the charge hour goal. These percentages were calculated the same as they were in the Audit Department. During the entire intervention period, there were 14 employees and the percentage of employees meeting or exceeding 100% of goal increased from only 20% during baseline to 43% during intervention, while 79% met or

exceeded 91% of the goal during intervention. By this measure, the intervention appeared to improve performance relative to baseline in this department.

Tax Department. In 1996, the Tax Department was at its highest percentage ever, when 100% of the five employees achieved ≥100% of the charge hour goal (see Table 4 and Figure 1). This is tempered by the fact that only one of these five employees had a full 1800-hour goal (employee #57; see Table 3). In 1997, four employees continued working there, one employee left, and six were added. Of the ten employees working there in 1997, the percentage of employees meeting or exceeding 100% of goal decreased to 70%. During the 1998/99 year, three employees left, seven remained, and six were added. Of these thirteen employees, the percentage that achieved ≥100% of the charge hour goal continued to decrease even more from 70% to 31% (4/13).

From January through December of 2000, 12 people worked in the Tax Department. Percentage of employees meeting or exceeding goal increased from 31% during the last year of baseline to 58% who met or exceeded 100% of the goal, with 83% meeting or exceeding 91% of the goal (see Table 4 and Figure 2). In 2001, 14 people worked in Tax (6 of whom were new hires), and only 7% (1/14) met or exceeded 100% of the goal while only 36% met or exceeded 91% of the goal. Interestingly, Figure 3 shows that six 2001 employees produced nearly uniform performance levels (just over 100% of goal level) in the first half of the year.

As shown in Table 3, four employees in Tax were there during at least one full year of baseline and one full year during the intervention period. Employee #58 began working there in 1997, however this employee's first full year was during the 1998/99

period. Percentages of charge hour goals met were as follows: 92% in 1998/99, then the percentage increased to 98% in 2000 (106% for the first period and 91% for the second), and finally decreased to 88% in 2001 (102% for the first period and 75% for the second). Employee #59 and #61 were also there in 1997 with their first full year of baseline in 1998/99. In 1998/99, the percentages of charge hour goals met for #59 were 113%, then decreased to 109% in 2000 (109% for the first period and 108% in the second), and finally, dropped to 95% in 2001 (101% in the first period and 90% in the second). For employee #61, percentages of charge hour goals were 105% in 1998/99, decreased to 98% in 2000 (92% for the first period and 103% for the second), and then stayed at 98% in 2001 (101% and 94%). Employee #70 began working in the organization in 1996, completing the first full year of baseline in 1997. In 1997, the percentages of charge hour goals met were 103%, increased to 109% in 1998/99, decreased to 93% in 2000 (103% for the first period and 84% for the second), and decreased again to 92% in 2001 (102% and 82%).

Throughout the baseline period, 28 people worked in the Tax Department and an average of 57% met or exceeded 100% of the charge hour goal. During intervention, 26 employees worked in Tax and the percentage who achieved ≥100% of the goal decreased from 57% during baseline to only 31%, while an average of 58% achieved 91% or better of the goal. By this measure, the intervention did not appear successful for this department.

Split Year Payout Periods

During 2000 and 2001, the 1800 charge hour goal was split between two pay periods: January 1st through May 31st, and June 1st through December 31st. In the Audit and Tax Departments, the charge hour goal was 875 for the first half and 925 for the second half, and for Accounting Services it was 800 and 1000 hours. In both 2000 and 2001, all departments, excluding Accounting Services in 2000, showed a decrease from the first period to the second period in the percentages of employees who met or exceeded both 91% and 100% of the charge hour goal.

Audit Department. Table 4 shows that in 2000, 71% of Audit employees met or exceeded 100% of the goal in the first half, while only 38% of them met goal in the second half. The percentage of employees meeting or exceeding 91% of the goal in 2000 decreased from 86% in the first half to 50% in the second. In 2001, 50% of the employees achieved ≥100% of the goal in the first half of the year (down from 71% in 2000). During the second half of 2001, the percentage of employees performing above 100% of goal level decreased to 22%. In the first half of 2001, 88% of employees met or exceeded 91% of the goal; during the second half of 2001, that percentage decreased to 33%.

Accounting Services Department. In Accounting Services, 50% of the employees achieved ≥100% of the goal in 2000 for the first half, and 60% of the employees did so in the second half. In 2000, 67% of the employees met or exceeded 91% of the goal during the first half, and 100% of them did so in the second period. In 2001, 75% of the employees (the highest ever) met or exceeded 100% of the goal in the first period while

only 20% did so in the second half. One hundred percent of the employees achieved ≥91% of the goal in the first half of 2001, but only 60% of the employees attained this level in the second pay period.

Tax Department. In 2000, 82% of the employees in Tax met or exceeded 100% of the goal in the first half, but only 38% met the goal during the second half. Additionally, 91% of the employees reached 91% or better of the goal in the first half, and 63% of them did so in the second half of the year. In 2001, the percentage of employees who met or exceeded 100% of the goal decreased to 70% in the first half of the year. By the second half of 2001, that percentage dropped to 0%. Also in 2001, 70% of employees met or exceeded 91% of the goal in the first half whereas only 15% met or exceeded that charge hour level in the second half of the year.

Production Data of Employees with Full Workloads

Percentages of charge hour goals were shown in Figures 1-3 and summarized with a department-wide statistic in Table 4 for all employees between 1996 and 2001 regardless of their annual charge hour goals. These data therefore did not distinguish between employees with full annual workloads and those with less than full workloads. Employees with less than 1800-hour goals included new hires and may have been different in important ways from employees who had full annual workloads. At the very least, employees with less than full workloads had less exposure to the contingencies of the performance pay plan by virtue of working at the firm for less time. The inclusion of employees with less than full workloads was necessary to give an overall picture of department performance, but their data can make it more difficult to determine the effect

of exposure to the intervention contingencies. When there was considerable growth or turnover within a department, as there was especially in the Audit and Tax departments during the intervention years, the percentage measures shown in Table 4 may not give the clearest picture of the effects of the intervention because that measure is confounded by the inclusion of so many new people hired at different points throughout the calendar year. By looking at actual charge hour production of those staff and senior accountants who worked the entire year and were assigned full annual workloads, a clearer comparison can be made between the baseline and intervention phases and across departments.

Figure 4 shows the average number of charge hours worked for each department from 1996 to 2001 for those employees who had an annual charge hour goal of 1800. Each department is displayed along the x-axis and the average number of charge hours is shown on the y-axis. Each year is represented by a different color.

Audit Department. In Audit in 1996, there were three employees with an annual charge hour goal of 1800 hours. The average charge hour production of these three employees was 1824 charge hours. This was calculated by adding the total number of charge hours for the three employees and dividing by three. In 1997, there were three employees with a goal of 1800 and the average production fell from 1824 hours to 1659 hours. By the 1998/99 year, only two employees had an annual goal of 1800 hours and average hours decreased from 1659 to 1588 hours. In 2000, the first year of intervention, there were four employees with an annual goal of 1800 hours. The number of charge hours increased from 1588 in the last year of baseline to 1786 hours in 2000 (a gain of

over 12%). During 2001, there were five full workload employees, and the average increased to 1800 hours, the highest level since the first year of baseline. Overall, for those in Audit with an annual charge hour goal of 1800 hours, production averaged 1703 hours during baseline, and 1794 hours (within 99% of goal) during intervention. By this measure, then, the intervention appeared successful in improving performance nearer to goal levels for employees with full workloads in this department.

Accounting Services Department. In Accounting Services in 1996, there was only one employee with an annual goal of 1800 hours and this employee worked 1799.7 charge hours. In 1997, there were three employees with this goal and the average decreased to 1719 hours. By 1998/99, there were three employees with a goal of 1800 hours and the average decreased from 1719 hours to 1621 hours. In 2000, there were also three employees and the average number of charge hours increased to 1791 charge hours (a gain of over 10%.) During 2001, the number of hours decreased slightly to 1779 hours. Overall, full workload employees in Accounting Services averaged 1701 hours during baseline and improved to 1785 hours (within 99% of goal) during intervention.

Tax Department. There was only one employee in Tax with an annual charge hour goal of 1800 hours in 1996, and this employee worked 2146 charge hours. In 1997, there were five employees with this goal and they averaged 1781 charge hours. During the 1998/99 year, there were eight employees and the number of charge hours decreased from 1781 in the previous year to 1750 hours. In the first year of intervention in 2000, there were five full workload employees and they averaged 1806 hours (a gain of 3%.) By 2001, there were eight employees and the number of charge hours decreased from

1806 in 2000 to only 1617 in 2001. For the entire baseline period, the full workload employees of the Tax Department averaged 1789 charge hours. For the intervention period, the average number of charge hours for those with an annual goal of 1800 hours decreased to 1690 due to the large decrease in the second year of the intervention.

Percentage of Salary Earned in Incentive Pay

Percentage of salary earned in incentive pay was calculated for the baseline and intervention periods. Because the 1998/99 period of intervention lasted over two different calendar years, percentage of salary earned in incentive pay was not calculated for this period because there were different salaries in 1998 to 1999. Percentage of salary earned in incentives was calculated for the baseline period (1996 and 1997) as a whole and for the intervention period (2000 and 2001).

It should be noted that incentive pay was awarded in 2000 and 2001 once employees met or exceeded 91% of the goal, compared with 1996 and 1997 when employees were only awarded incentive pay once they met or exceeded 100% of the goal. Differences in these percentages affect the total percentages earned in incentive pay for 2000 and 2001, therefore a comparison of those meeting or exceeding 100% of goal in 2000 and 2001 will also be discussed.

During baseline, 33% (4/12) of the twelve employees in Audit earned incentive pay and those four employees earned an average of 12.4% of their salaries. This was calculated by dividing the total dollar amount of incentive pay by the total dollar amount of salaries for those earning incentives, and then multiplying by 100. Some employees exceeded their charge hour goals but were not eligible for incentive pay because they

were hired so late in the year (and thus had very low charge hour goals.) In Audit in 2000 and 2001 (the intervention period), 50% of the thirty employees received, on average, 5.1% of their salaries when calculated for all employees who met or exceeded 91% or better of the goal. The five people (17%) in Audit who met or exceeded 100% of goal and earned incentive pay during the intervention earned an average of 11.8% of their salaries.

During baseline in Accounting Services, 25% (2/8) of the employees earned incentives averaging 25.6% of their salaries. This measure was skewed because the two employees had charge hour goals of 218 hours, just high enough to be eligible for incentive pay but low enough to be easily attainable. No employee with a full workload earned incentive pay during baseline. During intervention, 71% (10/14) of the employees earned incentives averaging 5.7% of their salaries for all of those at or above 91% of goal. The four employees at or above 100% of goal in Accounting Services earned an average of 7.9% of their salaries during intervention.

In the Tax department, 73% (11/15) of the employees earned incentive pay during baseline, averaging 9.5% of their salaries. During intervention, 69% (18/26) of the employees earned incentive pay, and they earned an average of 9.1% of their salaries. Five people in Tax met or exceeded 100% of goal and earned incentive pay during the intervention. The percentage of salary earned increased from 9.5% during baseline to 11.9% during intervention for those people exceeding 100% of goal level.

To summarize, a greater proportion of people in 2/3 departments (Audit and Accounting Services) earned some incentive money under the revised pay for

performance plan than under the old plan. This was due to a lower threshold for incentive payout (91% instead of 100% of goal) during the intervention years. Because the amount paid out was small between 91% of goal and 100% of goal, the amount of money earned in incentives was a smaller percentage of employee salary. For people who exceeded 100% of goal level, the amount of incentive pay as a percent of salary was comparable during baseline and intervention.

Firmwide Performance

The firm's profit and loss statements and income statements were examined to see how the firm's finances changed during the baseline and intervention years. At this aggregated level of analysis, one can see only general trends and it is more difficult to attribute observed changes to any one variable such as the new incentive pay plan. One can determine, however, whether the firm faired better or worse when the revised plan was in effect. Realization data may be important in this regard. Realization is the proportion of money billed to clients relative to the monetary value of the charge hours of work accumulated on client jobs (technically, net fees/gross fees). Realization was a small factor on the subjective portion of the staff and senior accountant's pay plan, and it was a larger part of the plan for managers and senior managers. Firmwide, realization averaged 88.2% in 1996, 88.5% in 1997, the two calendar baseline years. Realization was higher during the intervention years: 95.7% in 2000 and 93.8% in 2001. This means that more of the work done by employees was billed to the clients during the intervention years. Improved realization increases profitability, all other expenses being equal.

CHAPTER 4

DISCUSSION

Productivity data showed a clear decreasing trend across the three baseline years for all departments, both in the percentage of employees reaching the goal and in the average number of charge hours for those employees with full annual workloads. It is not clear why productivity was trending downward across the baseline years. The firm's CFO felt that the existing incentive system was not strong enough to continue to motivate performance, especially as the firm grew, because payouts occurred so late in they year (whenever people exceeded the annual charge hour goal) and those payout dates were far removed from the "busy season" for Tax and Audit personnel. As the firm continued to grow, the CFO and the Partners attempted to restore and maintain high productivity by implementing the new pay for performance plan. One feature of the new plan was that incentive pay would be available twice in the year, with one payout scheduled in June shortly after the busy season.

During the first full year of intervention in 2000, the Accounting Services and Tax departments showed an improvement from the last baseline year in the percentage of employees reaching 100% of goal. In 2001, the percentage of employees attaining goals decreased, suggesting that the new plan lost its effectiveness in the second year. However, the weakness in this measure is that the addition of new employees can lower the overall department productivity, possibly obscuring the effect of the incentive plan on

employees with more tenure. The new employees are possibly less skilled, and therefore unable to be as productive as more experienced employees. New hires also necessarily have less contact with the incentive contingencies than do employees with longer tenures.

Perhaps a clearer picture of the effects of the performance pay plan on productivity, not confounded by new people with less than a full workload, is given by the data on average number of charge hours for employees with 1800-hour workloads (this was shown in Figure 4). When examining average productivity data for those employees, all three departments improved from baseline in 2000. In fact, average charge hour production across all three departments approached or exceeded 100% of the goal level in 2000. Productivity in 2001 for Audit and Accounting Services staff and seniors remained above the level seen in the last two years of baseline. These data suggest that the performance pay plan does contribute to higher productivity by boosting the performance of employees with full workloads. The productivity of the Tax department's full workload employees, however, decreased substantially in 2001. The data from the Tax department suggest that there are flaws in the plan or that other variables can negate the positive effects of the plan.

What caused the deterioration in performance seen in the Tax department in 2001? Data from the split payout periods (Table 3) can help explain why overall annual productivity slumped in the Tax department, and to a lesser degree in the Audit department. The data showed a strong first half-second half differential in productivity with Audit and Tax. That is bound to occur to some degree in these departments due to the cyclical nature of the business where the majority of auditing and tax work is

processed in the first half of the year and there is much less work during the second half. But the differential widens in 2001 for the Tax department; no one attained 100% of the charge hour goal in the second half of the year.

Data on the percentage of employees attaining goal level (Table 3) were undoubtedly lowered by the addition of four new hires in the second half of 2001, none of whom attained goal levels. However, the productivity decrease in 2001 is observed even among full workload employees so it is not simply an artifact due to the inclusion of data from low performing new hires. It may be that the design of the payouts in the plan carried a flaw that affected some employees more than others. Under this plan, employees were paid on June 1st once they met or exceeded 91% of the charge hour goal for their performance during the first half of the year. They could bank some of these dollars in time off which, if not taken, could be converted back to cash paid out on December 31st, when they also received any incentive pay for their second half productivity as well as any money for the subjective performance measures for the entire year. Employees could meet goal for the first half of the year when work was plentiful, fail to meet goal in the second half, and still receive some incentive pay in June and at the end of the year regardless of their productivity in the second half.

The effects of a dispute over pay in the Tax department may have contributed to this problem. A number of employees in Tax resisted the new pay for performance plan because they had wanted straight time-and-a-half overtime pay based on the number of hours they worked rather than pay based on their productivity. These employees may have discovered the abovementioned weakness in the plan and taken advantage of it. In

this regard, it may not be coincidence that six Tax employees achieved just over 100% goal level in the first half (guaranteeing them substantial incentive pay) before slumping in the second half (this was visible in Figure 3.)

Other changes in the organization can counteract the motivational effects of the performance pay plan. The success of the performance pay plan is highly dependent on the opportunity to increase one's productivity. If too many new people are hired (regardless of their skills) without a concomitant increase in business, the department will become staffed at a level over capacity. In an overcapacity situation, there would not be enough work for all staff and seniors to do, thereby preventing some or all of the employees from maximizing their productivity. When this happens, work is generally allocated to the most experienced employees, who may be able to attain goal levels of production if the amount of work available is sufficient for that. If the available work remains too low, the motivational properties of the incentive pay plan will be lost because the goals will be unattainable and degrees of extinction may occur.

Such a scenario may have occurred in 2001 when the firm merged in employees from another firm and the amount of client work anticipated by the merger did not pan out (fewer clients followed the Partner from the old firm to the firm under study.) Sustained overcapacity may demoralize employees and make them resentful toward the incentive pay plan. There are several possible solutions to this problem. Some employees could be fired to reduce the overcapacity, although this is the least satisfactory solution. Efforts can be made to find new clients or extract more work from existing clients. Adjustments also could be made to goal levels in the performance pay plan to make them

fit the amount of work available. In any case, the ability of any performance pay plan to encourage and reinforce high productivity is inherently limited by the amount of work available to do. Overcapacity issues must be resolved for performance pay plans to work well.

The payout thresholds also may have caused an unintended problem with the plan. Small payouts were available starting at 91% of charge hour goals with much larger ones for performance above 100% of goal. This was intended to reinforce approximations to the 1800-hour goal, but it may have fostered the impression that 91% of 1800 was the de facto goal, causing employees to be satisfied producing just over that threshold and keeping them from striving for the full 1800 charge hours. There were anecdotal reports that some managers put too much emphasis on attaining 91% of goal instead of emphasizing the full 1800- hour goal when they explained the plan to their staff and seniors. To the extent this was true, the lesson would be that any and all communications regarding the plan should be monitored for inaccuracies if the plan is to work as designed.

The implementation of the new incentive system may have produced other positive effects on the firm beyond the effect on charge hour productivity of staff and seniors. Realization was higher during the intervention years than in the first two baseline years. The increase in realization can indicate that a greater proportion of charge hours produced were considered "good work" and thus justifiably billed to the clients during the intervention years. Realization was a small part of the subjective portion of the scorecards for staff and seniors, but it was a more important part of the managers', senior

managers', and partners' scorecards. Managers and above could directly improve realization by billing clients more and writing off less work. This suggests that elements of the multilevel performance pay plan may have worked even better on dimensions of performance other than productivity at higher levels in the firm.

It is possible that managers and above put pressure on staff and seniors to do better work to increase realization. If this were true, this would indicate that the increase in productivity consisted of high quality, billable work. On the other hand, it is also possible that less work was written off regardless of the quality; that is, that excess unnecessary hours were included in the final bill to the client simply to boost realization percentages. If that were the case, the firm would benefit financially, but it would not be attributable to high quality work, a risky business proposition for the long term. No data were available to determine which of these scenarios occurred.

For 2002, modifications of the pay for performance plan were made to address some of the weaknesses observed in the first two years. Under the 2002 revision, first half payouts were limited so that employees could only receive 60% of their productivity once they met or exceeded 91% of the goal. The remaining 40% of incentive pay was held back and only paid out in December if they exceeded the annual charge hour goal. The revision should encourage employees to maintain productivity across both payout periods. To support this further, the dollar amount of incentive pay has been adjusted so that more money will be paid out for achieving the 1800-hour goal. Results from this revision should be analyzed in future research to determine whether these adjustments improved performance.

Data from this thesis addresses issues raised by previous studies. Oah and Dickinson (1992) pointed out that one of the questions raised by researchers is what the appropriate proportion of incentives to base pay should be. Abernathy (2000) reviewed data from several of his client companies that implemented a pay for performance plan and found that incentive pay affected performance trends only when incentive pay was at 20% or above of base pay. The present analysis found that employees received, on average, between 5% and 12% of their base salaries in incentive pay and yet productivity improvement was observed in many cases. Of course, it is possible that higher incentive pay amounts would have generated greater productivity. This contention may be examined when data are examined from the 2002 revision, which pays out higher amounts at the 100% of goal threshold than the plan in effect during 2000 and 2001.

This thesis adds to the case study literature on the effects of incentive based pay plans in organizations. Outside of laboratory simulations, no pay for performance plan is implemented in an unchanging organization, so it is difficult to isolate the effects due to the presence of multiple confounding variables. This was true in the firm under study here. For example, the author was involved in coaching the manager of the Accounting Services Department in 2000 to focus on performance improvement techniques. In addition, a behavior-based management consulting firm conducted extensive training on principles of behavior and performance improvement for managers and above in 2000. Furthermore, the many changes in personnel due to hiring, firings, promotions, and mergers mean that one is studying the effects of intervention variables on a constantly changing population. It is perhaps best to acknowledge that the analysis of performance

pay plans in real world organizations will be inevitably confounded, and that any conclusions drawn regarding effectiveness must be regarded as statements about the interaction of the performance contingencies in the plan and other ongoing or changing variables in the firm.

APPENDIX A

EXAMPLE OF HOW TO CALCULATE OBJECTIVE PAY UNDER THE NEW PAY FOR PERFORMANCE PLAN

Components for calculating share of Objective Pay and Comp Bank:

1. Billing Rate
2. Actual Charge Hours
3. Target Charge Hours

To determine Comp Bank on June 1st:

4. Target Charge Hours x 91% = Comp Bank Target
5. Actual Charge Hours minus Comp Bank Target = Hours available for Comp Bank
6. Select number of hours to be taken as time off

To determine Payout:

7. Actual Charge Hours / Target Charge Hours = Percentage of Achievement
8. Using Table 1, determine corresponding Share of Productivity Earned
9. Multiply Charge Hours by Billing Rate = Productivity
10. Multiply Share of Productivity Earned by Productivity = Payout

For example:

1. Billing Rate = $85.00
2. Actual Charge Hours = 933.00
3. Target Charge Hours = 867.00

4. 867 x .91 = 789 Comp Bank Target
5. 933 – 789 = 144 hours available for Comp Bank, however 80 hours is the max
6. Select number of hours to bank as time off = 60 hours
7. 933 / 867 = 108% (Percentage of Achievement)
8. 108% of Achievement = 2.50% Share of Productivity Earned
9. 933.00 x $85.00 = $79,305 (Productivity)
10. 2.50% x $79,305 = $1982.63
11. $1982.63 / 144 = $13.7682 Available payout per hour
12. $13.7682 x 84 (144 hours available minus 60 banked hours) = $1,156.53
13. Paid on June 1st

APPENDIX B

EXAMPLE OF HOW TO CALCULATE SUBJECTIVE PAY

Dimensions for Subjective Pay:

1. Realization (what was actually billed divided by what was considered for billing)
2. First pass accuracy and technical competencies
3. Customer Service
4. Above and beyond activities

Rating scale scores for 10 items relating to Subjective Pay performance dimensions:

1 = Needs greater improvement or participation
5 = Meets expectations and warrants recognition
10 = Exceeds expectations and warrants significant recognition

- Each employee earns a score on a rating sheet using the above dimensions; there is a maximum score of up to 100 points
- The entire service area's points are then totaled, and each employee's individual score is divided by the total service area's score to equal the percentage of Subjective Pay earned

Example of how Subjective Pay pool is funded:

Department X has 8 employees

Employee	Productivity (charge hours x billing rate)
1	$156,000.00
2	$99,500.00
3	$160,000.00
4	$102,000.00
5	$100,000.00
6	$175,000.00
7	$160,000.00
8	$158,000.00
TOTAL	$1,110,500

If 5 of these 8 employees met or exceeded the charge hour goal, then:

$1,110,500 (total department's productivity) x .75% (percentage used since more than half met criteria) = $8,328.75 which funds Subjective Pay pool for this department

Example of how each employee is paid their portion of Subjective Pay:

Employee	Rating sheet score
1	50
2	90
3	23
4	30
5	14
6	100
7	46
8	63
DEPARTMENT TOTAL	426

1. Divide the employee's score by total score = percentage of pool earned
2. Multiply percentage of pool earned by the total amount in pool

For example, Employee 1 would earn:

1. 50/426 = 0.117
2. 0.117 x $8,328.75 = $974.46 for Subjective Pay

APPENDIX C

TABLES AND FIGURES

Table 1
Previous Incentive System

# of Charge Hours	Percentage of Hourly Rate Earned
1801-1900	1.3
1901-2000	1.35
2001-2100	1.4
2101-2200	1.5

Table 2
New Incentive System

Percent of Productivity Achieved	Share of Productivity Earned
91% - 95%	0.25%
96% - 100%	0.50%
101% - 105%	2.00%
106% - 110%	2.50%
111% - 115%	3.0%
116% - 120%	3.5%
121% -125%	4.0%

Table 3
Audit Department

Employee		1996	1997	98-99	1st 2000	2nd 2000	1st 2001	2nd 2001
1.	CHG	1800	1800					
	% of Goal	107	96					
	% of Salary	7.5	-					
2.	CHG		173					
	% of Goal		149					
	% of Salary		-					
3	CHG			606	875	925	875	925
	% of Goal			95	106	101	107	102
	% of Salary			NA		21.9		4.8
4.	CHG			1409				
	% of Goal			102				
	% of Salary			NA				
5.	CHG				875	925	875	925
	% of Goal				110	107	112	93
	% of Salary					28.7		6.6
6.	CHG							133
	% of Goal							51
	% of Salary							-
7.	CHG			1136				
	% of Goal			106				
	% of Salary			NA				
8.	CHG				875	925	875	925
	% of Goal				101	89	96	86
	% of Salary					6.5		0.9
9.	CHG							690
	% of Goal							77
	% of Salary							-
10.	CHG							775
	% of Goal							94
	% of Salary							-
11.	CHG						835	925
	% of Goal						101	89
	% of Salary							4.0
12.	CHG			1691				
	% of Goal			84				
	% of Salary			NA				

Table continues

Table 3 continued

13.	CHG % of Goal % of Salary						346 88 -	
14.	CHG % of Goal % of Salary	1800 99 -						
15.	CHG % of Goal % of Salary							527 60 -
16.	CHG % of Goal % of Salary	1800 98 -	1800 90 -					
17.	CHG % of Goal % of Salary							162 58 -
18.	CHG % of Goal % of Salary							359 69 -
19.	CHG % of Goal % of Salary				785 101	925 90 8.1	875 107	925 101 4.9
20.	CHG % of Goal % of Salary							534 88 -
21.	CHG % of Goal % of Salary			1800 79 NA	875 93 1.0			
22.	CHG % of Goal % of Salary					853 94 4.0	875 97 1.9	
23.	CHG % of Goal % of Salary					270 61 -	875 95	925 103 0.5
24.	CHG % of Goal % of Salary							601 59 -
25.	CHG % of Goal % of Salary							162 63 -
26.	CHG % of Goal % of Salary	218 126 20.9						

Table continues

Table 3 continued

27.	CHG % of Goal % of Salary					483 73 -		
28.	CHG % of Goal % of Salary							775 101 -
29.	CHG % of Goal % of Salary			894 90 NA	875 80	925 100 1.0		
30.	CHG % of Goal % of Salary			665 86 NA				
31.	CHG % of Goal % of Salary	470 119 15.9	1800 91 -	1413 108 NA				
32.	CHG % of Goal % of Salary							231 28 -
33.	CHG % of Goal % of Salary	312 126 19.4						
34.	CHG % of Goal % of Salary		180 118 -	1800 97 NA	875 104 7.7			
35.	CHG % of Goal % of Salary							745 82 -
36.	CHG % of Goal % of Salary		180 130 -	1646 101 NA				

Table continues

Table 3 continued

Accounting Services Department

Employee		1996	1997	98-99	1st 2000	2nd 2000	1st 2001	2nd 2001
37.	CHG	218	1800					
	% of Goal	133	96					
	% of Salary	27.0	-					
38.	CHG		147	1575				
	% of Goal		203	92				
	% of Salary		-	NA				
39.	CHG			829	800			
	% of Goal			93	82			
	% of Salary			NA	-			
40.	CHG				800			
	% of Goal				103			
	% of Salary				5.2			
41.	CHG	218	1800					
	% of Goal	75	95					
	% of Salary	23.76	-					
42.	CHG					555		
	% of Goal					103		
	% of Salary					6.1		
43.	CHG			1548				
	% of Goal			86				
	% of Salary			NA				
44.	CHG		1721	1800				
	% of Goal		89	93				
	% of Salary		-	NA				
45.	CHG							410
	% of Goal							89
	% of Salary							-
46.	CHG			1800	670			
	% of Goal			91	81			
	% of Salary			NA	-			
47.	CHG				800	1000	800	1000
	% of Goal				104	101	102	89
	% of Salary					11.6		2.8
48.	CHG			914	800	1000	800	1000
	% of Goal			105	106	101	101	101
	% of Salary			NA		15.5		3.0
49.	CHG	1800	1800	1800	800	1000	800	1000
	% of Goal	99.98	95	92	92	94	97	96
	% of Salary	-	-	NA		4.8		0.8

Table continues

Table 3 continued

50.	CHG % of Goal % of Salary					542 96 1.3	800 101 2.6	
51.	CHG % of Goal % of Salary							548 94 -

Table continues

Table 3 continued

Tax Department

Employee		1996	1997	98-99	1st 2000	2nd 2000	1st 2001	2nd 2001
52.	CHG		734	1800	875			
	% of Goal		90	94	100			
	% of Salary		-	NA	0.9			
53.	CHG							692
	% of Goal							55
	% of Salary							-
54.	CHG					925	875	925
	% of Goal					86	102	68
	% of Salary					-		4.1
55.	CHG			1286	875	925	875	925
	% of Goal			95	126	83	141	64
	% of Salary			NA		22.1		17.0
56.	CHG				835	925		
	% of Goal				116	93		
	% of Salary					8.9		
57.	CHG	1800	1800	1800				
	% of Goal	119	111	96				
	% of Salary	23.4	12.1	NA				
58.	CHG		1730	1800	875	925	875	925
	% of Goal		79	92	106	91	102	75
	% of Salary		-	NA		11.5		4.1
59.	CHG		1628	1800	875	925	875	925
	% of Goal		102	113	109	108	101	90
	% of Salary		5.3	NA		22.6		3.9
60.	CHG	390	1800	1800				
	% of Goal	124	102	92				
	% of Salary	18.8	1.9	NA				
61.	CHG		1410	1800	875	925	875	925
	% of Goal		107	105	92	103	101	94
	% of Salary		7.4	NA		11.5		4.0
62.	CHG		1800					
	% of Goal		71					
	% of Salary		-					
63.	CHG		1128					
	% of Goal		101					
	% of Salary		-					
64.	CHG			852	750	925	875	925
	% of Goal			77	126	101	101	60
	% of Salary			NA		26.8		4.1

Table continues

Table 3 continued

65.	CHG % of Goal % of Salary			1192 119 NA	875 101 3.2			
66.	CHG % of Goal % of Salary			1800 75 NA	875 84 -		780 59 -	
67.	CHG % of Goal % of Salary						875 88	925 71 -
68.	CHG % of Goal % of Salary	540 113 11.3						
69.	CHG % of Goal % of Salary			1347 84 NA				
70.	CHG % of Goal % of Salary	218 108 6.3	1800 103 3.1	1800 109 NA	875 103	925 84 7.4	875 102	925 82 3.6
71.	CHG % of Goal % of Salary				750 101 10.2			
72	CHG % of Goal % of Salary						823 87	925 65 -
73.	CHG % of Goal % of Salary							618 96 -
74.	CHG % of Goal % of Salary							925 74 -
75.	CHG % of Goal % of Salary							618 76 -
76.	CHG % of Goal % of Salary			1039 96 NA				
77.	CHG % of Goal % of Salary	505 120 19.4	1800 106 6.2					
78	CHG % of Goal % of Salary			1247 87 NA				

Table continues

Table 3 Key

1. CHG – Charge hour goal; target was prorated if employee was there for partial year

2. % of Goal – Calculated by dividing the charge hour target by the actual number of charge hours worked

3. % of Salary – Calculated by dividing the employee's base salary by the total dollar amount he earned in incentive pay

4. A dash (-) indicates that no incentive pay was awarded

Note: % of Salary was only calculated for the entire year for both 2000 and 2001. Therefore, this amount is displayed under the 2nd 2000/2001 heading, unless employee was only there during the 1st half of the year.

Table 4
Percentage of Employees Attaining Goal Levels

Entire Year

1996			1997			1998 – 1999		
Dept.	# of Employees	% of Dept. ≥100%	Dept.	# of Employees	% of Dept. ≥100%	Dept.	# of Employees	% of Dept. ≥100%
Audit	6	67%	Audit	6	50%	Audit	10	40%
ACS	3	33%	ACS	5	20%	ACS	7	14%
Tax	5	100%	Tax	10	70%	Tax	13	31%

2000				2001			
Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%	Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%
Audit	10	70%	30%	Audit	20	45%	20%
ACS	8	75%	50%	ACS	6	83%	33%
Tax	12	83%	58%	Tax	14	36%	7%

Split By Payout Period

2000							
01/01/00 – 05/31/00				06/01/00 – 12/31/00			
Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%	Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%
Audit	7	86%	71%	Audit	8	50%	38%
ACS	6	67%	50%	ACS	5	100%	60%
Tax	11	91%	82%	Tax	8	63%	38%

2001							
01/01/01 – 05/31/01				06/01/01 – 12/31/01			
Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%	Dept.	# of Employees	% of Dept. ≥91%	% of Dept. ≥100%
Audit	8	88%	50%	Audit	18	33%	22%
ACS	4	100%	75%	ACS	5	60%	20%
Tax	10	70%	70%	Tax	13	15%	0%

Figure 1. Percentage of charge hour goal met for each employee in the Audit department (top), Accounting Services (middle), and Tax (bottom).

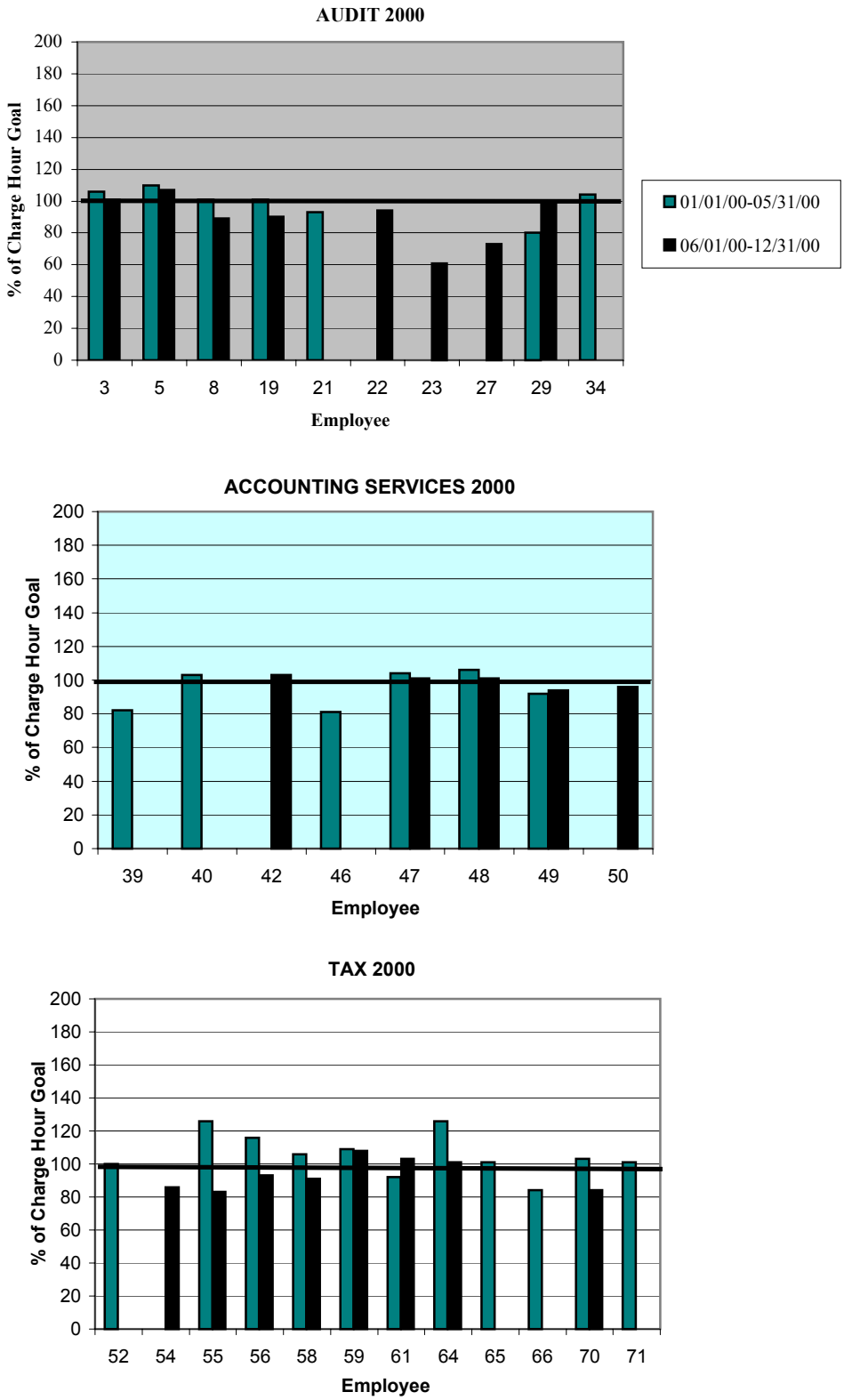

Figure 2. Percentage of charge hour goal met for each period in the Audit department (top), Accounting Services (middle), and Tax (bottom).

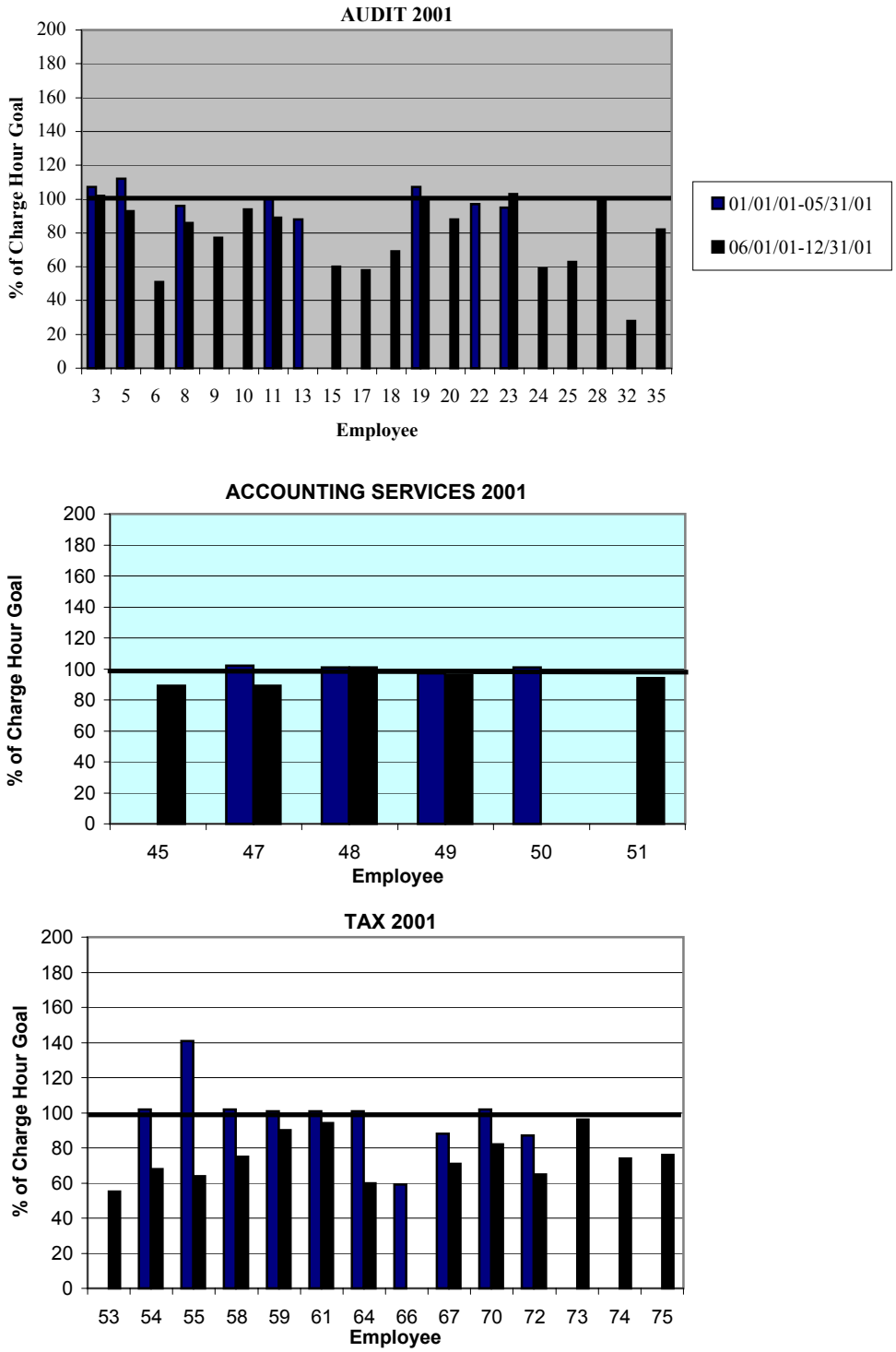

Figure 3. Percentage of charge hour goal met for each period in the Audit department (top), Accounting Services (middle), and Tax (bottom).

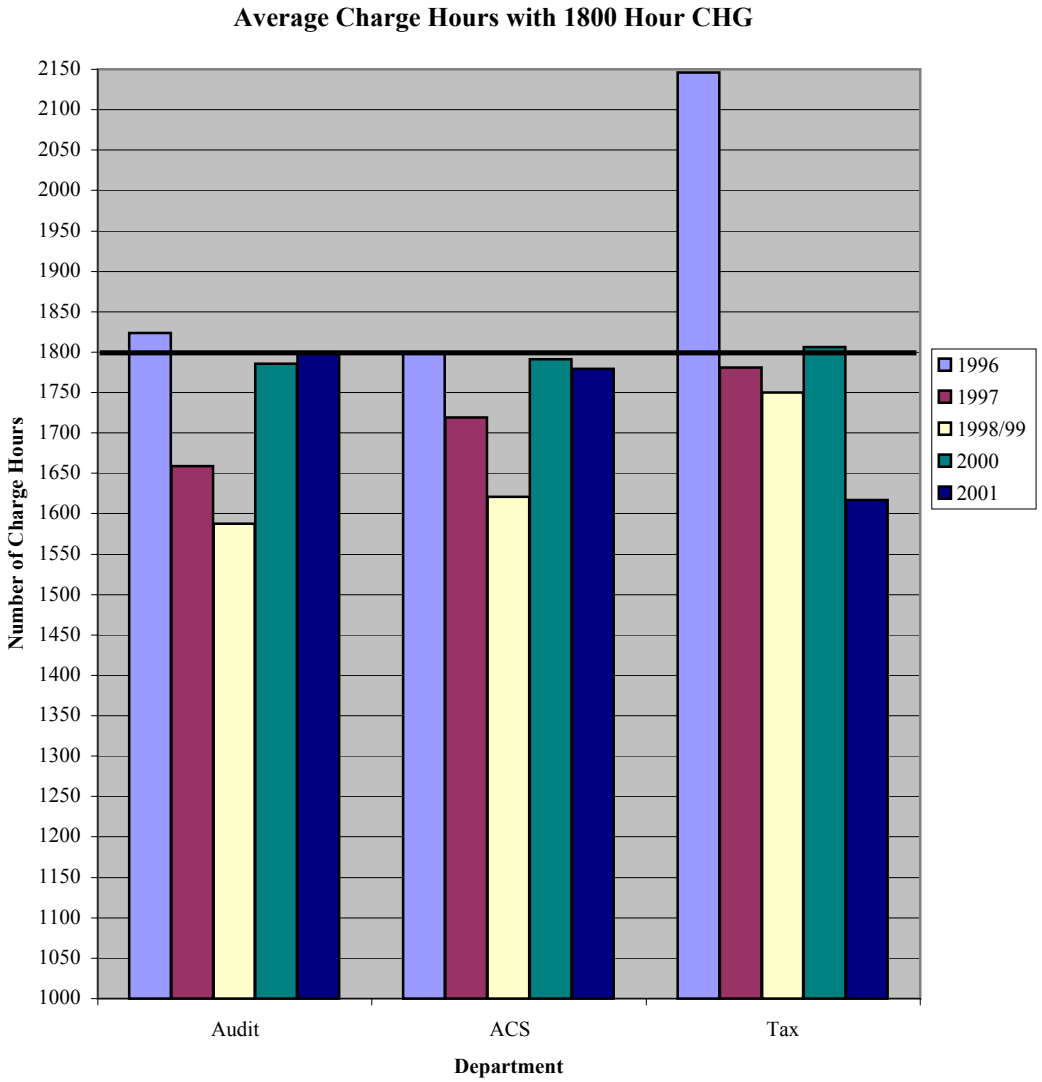

Figure 4. Average number of charge hours per year for employees with full annual workloads in the Audit department (left), Accounting Services (middle), and Tax (right).

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